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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/747,920

12/29/2003

Harlan T. Beverly

P17601

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09/29/2006

KONRAD RAYNES & VICTOR, LLP.

ATTN: INT77

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EXAMINER

CHOI, WOO H

ART UNIT

PAPER NUMBER

2189

DATE MAILED: 09/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/747,920

Applicant(s)

BEVERLY, HARLAN T.

Examiner

Woo H. Choi

Art Unit

2189

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10,12-21,23-32,34-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2, 6 – 10, 11, 13, 17 – 21, 23, 24, 28 – 32, 35 – 37 and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Griffin et al. (US Patent Application Publication No. 2002/0161869, hereinafter “Griffin”).

3. With respect to claims 1 and 12, Griffin discloses a method (page 7, paragraph 80), comprising:

designating a first portion of a virtual memory space as an unreserved portion which is conditionally accessible by a class of memory users which includes at least one memory user wherein said unreserved portion is mapped to physical memory space (virtual addresses are partitioned into two ranges, one for nodes, i.e., “unreserved”, and one reserved for objects); designating a second portion of said virtual memory space as a reserved portion which is conditionally unavailable for use by any memory user of said class of memory users (virtual address range reserved for objects are only available for object users) wherein none of said

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reserved portion is mapped to physical memory space (page 2, paragraph 24, objects are I/O devices, not physical memories; see also figure 3 and page 4, paragraph 53, the object virtual address partition is reserved for objects such as IOAs and DASD units); and

converting a subportion of one of said unreserved portion and said reserved portion to a subportion of the other of said unreserved portion and said reserved portion (the virtual address space partition boundary can be moved to reallocate memory space depending on the need).

4. With respect to claims 23 and 36, in figures 1 and 2, Griffin discloses a physical memory including data storage, a processor, a network controller, and a data storage controller.

5. With respect to claims 2, 9, 13, 20, 24, 31 and 37, while not specifically disclosed, send and receive buffers and associated processes are required for I/O (20) and communications between devices (22, 24) and processors (12), between processors (12), and between nodes (4).

6. With respect to claims 6 – 8, 17 – 19, 28 – 30 and 40, see page 7, paragraph 80. The virtual address boundary can shift either way depending on which partition needs more memory space.

7. With respect to claims 10, 21 and 32, see figure 2.

8. With respect to claim 35, see figure 2, 28 shows a workstation with a video monitor, hence a video controller, which is coupled to the processor 12 via the workstation controller 22.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 2 – 5, 13 – 16, 24 – 27 and 37 – 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Griffin in view of Georgious et al. (US Patent No. 7,003,597, hereinafter “Georgious”).

Griffin discloses all of the limitations of the parent claims as discussed above. However, Griffin does not specifically disclose allocating and unallocating buffers using a bitmap as claimed. On the other hand, Georgious discloses using a bitmap to keep track of allocated and free buffers (col. 6, line 58 – col. 7, line 4). It would have been obvious to one of ordinary skill in the art, having the teachings of Griffin and Georgious before him at the time the invention was made, to use a bit map to keep track of allocated buffers as taught by Georgious in the system Griffin as an alternative to using a linked list to keep track of memory allocation (col. 7, lines 1 – 2).

11. Claims 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Griffin in view of Ikeda (US Patent Application Publication No. 2004/0076163).

Griffin discloses all of the limitations of the parent claim as discussed above. Griffin also discloses that a local area network may be used to interconnect the nodes (page 3, paragraph 30). However, Griffin does not specifically disclose that the LAN is an Ethernet LAN. On the other hand, Ikeda discloses that Ethernet technology is standardized and is one of the most popular and useful techniques for building LANs (Ikeda, page 1, paragraph 3). Ikeda also discloses unshielded twisted pairs are used for lines in a typical LAN (paragraph 4). It would have been obvious to one of ordinary skill in the art, having the teachings of Griffin and Ikeda before him at the time the invention was made, to use an Ethernet LAN in the system of Griffin, since Ethernet LAN technology is one of the most popular and useful techniques for building LANs.

Response to Arguments

12. Applicant's arguments filed July 18, 2006, have been fully considered but they are not persuasive. As Applicant observed, the "reserved" portion of the virtual address in Griffin's method corresponds to the virtual space allocated for objects. Griffin discloses these objects to be I/O devices (presumably for memory mapped I/O), not physical memory devices.

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Woo H. Choi whose telephone number is (571) 272-4179. The examiner can normally be reached on M-F, 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Reginald Bragdon can be reached on (571) 272-4204. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Woo H. Choi
September 22, 2006